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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,392	09/14/2000	Raymond P. Mariella JR.	IL-10560	1299

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EXAMINER

CONLEY, SEAN E

ART UNIT

PAPER NUMBER

1744

DATE MAILED: 03/26/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/662,392

Applicant(s)

MARIELLA, RAYMOND P.

Examiner

Sean E Conley

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-18 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Response to Amendment

1. The amendment filed December 18, 2002 has been received and considered for examination. Claims 1-18 remain pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Pearman (U.S. Pat. 6,296,808 B1).

Pearman discloses a method and apparatus for protecting building personnel

during a chemical or biological attack. The apparatus **20** decontaminates the environment inside a building in response to detection of an agent harmful to human life such as a chemical or biological agent. The apparatus comprises a sprinkler head **32** above a walkway such as a hallway through which personnel are expected to walk. The system utilizes a sensor **44** for detecting chemical or biological agents. This sensor is a chemical or biological detector (CBD) and it is coupled to a controller **40**, which activates the sprinkler **32** in response to the detection of the chemical or biological agents (see figure 1, column 1, lines 60-63, column 2, line 55 to column 3, line 20).

It should be noted that the preamble of the claim is not given any patentable weight because it only recites the intended use of the apparatus.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 2, 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pearman as applied to claim 1 above and further in view of Groger et al. (U.S. Pat. 5,766,956).

Pearman does not disclose or teach using antibody based immunoassays or nucleic-acid based assays for the detection of pathogens.

Groger et al. discloses in column 1, lines 8-62, that existing biosensors are based on antibody-antigen and nucleic acid-analyte methods. These biosensors are used to detect micro-organisms and toxins considered for use in biological warfare by terrorists.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means in the invention of Pearman with biosensors based on antibody-antigen and nucleic acid-analyte methods taught by Groger et al. for the purpose of detecting and treating a large variety of biological or chemical toxins present in the air contained inside a building.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pearman as applied to claim 1 above and further in view of Anbar (U.S. Pat. 4,022,876 A).

Pearman does not teach specifically using mass spectrometric-based assays for the detection of pathogens.

Anbar discloses that a mass spectrometric-based assay is used when determining the amount of bound antigen-antibodies which can be used to identify and detect the type of chemical agent and amount present in the air being treated.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means of Pearman with mass spectrometric-based assays as taught by Anbar for the purpose of detecting and treating a large variety of biological or chemical toxins present in the air contained inside a building.

Applicant's Arguments

8. Regarding claim 1, the applicant has argued that the reference to Pearman does not teach "treating said air inside of said enclosed airspace" and further, "since the steps of twice amended claim 1, described above, are not shown by Pearman the rejection is unsupported in the art and should be withdrawn".

Regarding the combination of Pearman reference with the references to Groger et al. and Anbar as applied to claims 2-6, the applicant argues that there is no suggestion or motivation to combine the references.

Response to Arguments

9. In response to applicant's argument that the reference to Pearman does not teach "treating said air inside of said enclosed airspace" and further "since the steps of twice amended claim 1, described above, are not shown by Pearman the rejection is unsupported in the art and should be withdrawn", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior

art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Specifically, the "treating said air inside of said enclosed airspace" is an intended use limitation of the invention and therefore is not given patentable weight in a system claim. Furthermore, the applicant refers to the "steps" recited in claim 1. However, as stated previously, the claim is a system claim and not a method claim. The patentable subject matter of a system claim comprises the structural elements of the invention and not the intended use or methodical steps of using the invention.

10. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the references to Groger et al. and Anbar both teach alternate types of biosensors used for detecting chemical weapons and/or biological pathogens and therefore would have been obvious replacements for the chemical weapon/biological pathogen detector taught by the

apparatus of Pearman in order to detect a wide variety of biological or chemical weapons during an attack.

Allowable Subject Matter

11. Claims 7-18 are allowed.
12. The following is an examiner's statement of reasons for allowance: The prior art does not teach or fairly suggest a method of detecting chemical weapons and/or biological pathogens in a circulating air stream, further comprising the steps of generating a signal in response to the detection of chemical or biological agents wherein the signal is used to activate a treatment system connected to the air stream. Furthermore, the prior art does not teach an apparatus with an autonomous chemical and pathogen detector located within a forced air circulation system, a treatment system for treating the contaminated air stream, and a control that, in response to a detected chemical weapon and/or biological pathogen, sends a signal to active the treatment system.

The closest prior art to the applicant's claimed invention are the references to Pearman (U.S. Pat. 6,296,808 B1) and Mascolo et al. (U.S. Pat. 5,078,046).

Pearman and Mascolo et al. both fail to teach or suggest an autonomous chemical weapon and/or biological pathogen detector located within a forced air circulation system for treating a contaminated air stream.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Conley, whose telephone number is (703) 305-2430. The examiner can normally be reached on Monday-Friday 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Robert Warden, can be reached at (703) 308-2920. The Unofficial fax phone number for this group is (703) 305-7719. The Official fax phone number for this Group is (703) 872-9310.

When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of the application. This will expedite the processing of your papers.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [robert.warden@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees will not communicate with applicant via internet e-mail where sensitive data will be exchanged or where there exists a possibility that sensitive data could be identified unless there is

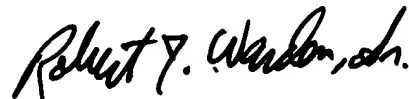
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of record express waiver of the confidentiality requirements under 35 U.S.C. 122 by the applicant. See the Interim Internet Usage Policy published by the Patent and Trademark Office Official Gazette on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist, whose telephone number is (703) 308-0661.

SEC

March 24, 2003



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SUPERVISORY PATENT EXAMINER
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